

09/718,943

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(FILE 'HOME' ENTERED AT 14:42:08 ON 07 JAN 2002)

FILE 'CA' ENTERED AT 14:42:16 ON 07 JAN 2002

E GASSENMEIER THOMAS/IN
L1 42 S E3-E4
E MILLHOFF JUERGEN/IN
L2 10 S E3-E4
L3 2899 S (SILICATE# OR ALUMINOSILICATE# OR ZEOLITE# OR PHOSPHATE# OR
S
L4 86 S L3 AND DETERGENT#(P) (PARTICLE# OR POWDER? OR GRANUL? OR
AGGLO
L5 89 S L3 AND DETERGENT#(P) (PARTICLE# OR POWDER? OR GRANUL? OR
AGGLO
L6 179072 S PARTICLE(3A) (SIZE# OR DIAMETER OR RADIUS)
L7 13 S L5 AND L6

FILE 'USPATFULL' ENTERED AT 15:43:02 ON 07 JAN 2002

L8 205 S L7
L9 750 S (SILICATE# OR ALUMINOSILICATE# OR ZEOLITE# OR PHOSPHATE# OR
S
L10 52 S L9 AND DETERGENT#(P) (PARTICLE# OR POWDER? OR GRANUL? OR
AGGLO

=>

L2 ANSWER 1 OF 10 CA COPYRIGHT 2002 ACS
 AN 135:21246 CA
 TI Method for the production of particulate washing or cleaning agents
 IN **Millhoff, Juergen**; Schmiedel, Peter; Von Rybinski, Wolfgang;
 Krupp, Ute; Gassenmeier, Thomas Otto
 PA Henkel Kommanditgesellschaft Auf Aktien, Germany
 SO PCT Int. Appl., 16 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 IC ICM C11D017-00
 ICS C11D003-06; C11D003-39; C11D003-08; C11D003-10; C11D003-12
 CC 46-6 (Surface Active Agents and Detergents)
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--|------|----------|------------------|----------|
| PI | WO 2001038477 | A1 | 20010531 | WO 2000-EP11425 | 20001117 |
| | W: AU, BR, CN, CZ, DZ, HU, ID, IL, IN, JP, KR, MX, PL, RO, RU, SG, SI, SK, TR, UA, ZA | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR | | | | |
| | DE 19957036 | A1 | 20010531 | DE 1999-19957036 | 19991126 |

PRAI DE 1999-19957036 A 19991126

AB The particulate washing or cleaning agents, or their precursors are
 manufd. by coating a free-flowing acid component, e.g., a C10-22 mono- or
 dicarboxylic acid, C10-22 alk(en)yl sulfate, C10-22 alkylarylsulfonate,
 etc., on a particle comprising an alk. washing or cleaning agent-contg.
 material. As a result, the washing process begins at a relatively lower
 pH which, after a specified period of time, changes to higher values.

The
 amt. of coated acid component depends on the radius of the solid
 particle,
 i.e., $mc/(mc + mp) = c \cdot \text{cntdot} \cdot 1/r$, where mc = mass of the acid
 component, mp = mass of the particles, r = radius of the particles
 (preferably 100-1000 .mu.m), and c = factor of 0.5-20 length units. For
 example, a particulate component of a solid detergent was manufd. by
 mixing 1 kg Na percarbonate (av. particle size 400 .mu.m) with 25 g
 stearic acid at ambient temp., heating and compounding the mixt. in a
 blender for 20 min at 80.degree., and cooling.

ST detergent component particle acid coating; stearic acid coating sodium
 percarbonate solid detergent component

IT Detergents
 (manuf. of particulate washing or cleaning agents comprising
 acid-coated particles)

IT 57-11-4, Stearic acid, uses
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical
 process); PROC (Process); USES (Uses)

(manuf. of particulate washing or cleaning agents comprising
 acid-coated particles)

IT 15630-89-4, Sodium percarbonate
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or
 engineered material use); PROC (Process); USES (Uses)
 (manuf. of particulate washing or cleaning agents comprising
 acid-coated particles)

RE.CNT 6

RE

(1) Akzo Nv; GB 2000177 A 1979 CA

- (2) Henkel Kgaa; DE 4128826 A 1993 CA
- (3) Kao Corp; EP 0790298 A 1997 CA
- (4) Mouret, G; US 3525695 A 1970
- (5) Procter & Gamble; FR 2180864 A 1973 CA
- (6) Solvay Interlox GmbH; DE 4344831 A 1995 CA

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L5 ANSWER 26 OF 89 CA COPYRIGHT 2002 ACS

AN 127:250203 CA

TI Manufacture of stable **granular** sodium percarbonate suitable for bleaching agent in **detergent** compositions

IN Kim, San Ryul; Kwan, Chon Yun; Heo, Fan Ki; Lee, Jong Pil

PA Oriental Chemical Industries, Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C01B015-10

CC 49-5 (Industrial Inorganic Chemicals)

Section cross-reference(s): 46

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--|------|----------|-----------------|----------|
| | ----- | --- | ----- | ----- | ----- |
| PI | JP 09235109 | A2 | 19970909 | JP 1996-68978 | 19960301 |
| AB | In manuf. of Na percarbonate by spraying H ₂ O ₂ aq. solns. to NaCO ₃ which is stirred by air flow in a container to give Na percarbonate at a const. temp. followed by drying to give Na percarbonate grains, unpurified Na carbonate anhydride is used as a raw material and the Na percarbonate grains of prescribed size are taken out from the dryers while unhomogeneous-sized grains are recirculated for continuously manufg. process. In manuf. of the Na percarbonate grains in reactors or fluidized bed dryers, Mg sulfate and .gtoreq.1 compds. selected from (A) water glass or powd. or granular Na silicate (aq. solns.) having a general formula Na ₂ O.nSiO ₂ .xH ₂ O (n = 1-4, x = 0-9), (B) higher aliph. acids (esters) of hydrocarbons or polyols and optionally polyoxyethylene, (C) pyridine compds. (salts) having .gtoreq.1 carboxy substitutes, and (D) arom. or aliph. amine (salts) having .gtoreq.1 sulfonic acid groups or carboxyl groups are allowed to be mixed into or on the surfaces of Na percarbonate grains. The Na silicate coatings improve soly. in cold water while the claimed org. compds. work as sequestering agents to prevent decompn. of the Na percarbonate grains which may contain transition metal impurities in moist air. | | | | |
| ST | sodium percarbonate bleaching agent manuf; detergent bleacher sodium percarbonate granule ; sequestering agent coating sodium percarbonate bleacher | | | | |
| IT | Coatings (atm. moisture-resistant; manuf. of granular Na percarbonate suitable for bleaching agents in detergent compns.) | | | | |
| IT | Glycosides Polyoxyalkylenes, uses Sequestering agents RL: TEM (Technical or engineered material use); USES (Uses) (coatings on Na percarbonate grains; in manuf. of granular Na percarbonate suitable for bleaching agents in detergent compns.) | | | | |
| IT | Fatty acid esters Sugar esters RL: TEM (Technical or engineered material use); USES (Uses) (coatings on Na percarbonate grains; manuf. of granular Na percarbonate suitable for bleaching agents in detergent compns.) | | | | |

IT Amines, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (having **sulfonic acid** groups or carboxyl groups,
coatings on Na **percarbonate** grains; in manuf. of
granular Na **percarbonate** suitable for bleaching
 agents in **detergent** compns.)

IT Bleaching agents
Detergents
 (manuf. of **granular** Na percarbonate suitable for bleaching
 agents in **detergent** compns.)

IT 54-21-7, Sodium salicylate 57-50-1, uses 69-65-8, D-Mannitol
 110-86-1D, Pyridine, carboxy derivs. 482-54-2 499-83-2, Dipicolinic
 acid 1344-09-8, Water glass 6834-92-0, Sodium metasilicate
 7487-88-9, Magnesium sulfate, uses 25322-68-3
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings on Na percarbonate grains; in manuf. of **granular** Na
 percarbonate suitable for bleaching agents in **detergent**
 compns.)

IT 3313-92-6P, Sodium percarbonate
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (**granular**; manuf. of **granular** Na percarbonate
 suitable for bleaching agents in **detergent** compns.)

IT 497-19-8, Sodium carbonate, reactions 7722-84-1, Hydrogen peroxide,
 reactions
 RL: RCT (Reactant)
 (in manuf. of **granular** Na percarbonate suitable for bleaching
 agents in **detergent** compns.)

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L5 ANSWER 26 OF 89 CA COPYRIGHT 2002 ACS

AN 127:250203 CA

TI Manufacture of stable **granular** sodium percarbonate suitable for bleaching agent in **detergent** compositions

IN Kim, San Ryul; Kwan, Chon Yun; Heo, Fan Ki; Lee, Jong Pil

PA Oriental Chemical Industries, Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C01B015-10

CC 49-5 (Industrial Inorganic Chemicals)

Section cross-reference(s): 46

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|-------------|------|----------|-----------------|----------|
| | ----- | --- | ----- | ----- | ----- |
| PI | JP 09235109 | A2 | 19970909 | JP 1996-68978 | 19960301 |

AB In manuf. of Na **percarbonate** by spraying H₂O₂ aq. solns. to NaCO₃ which is stirred by air flow in a container to give Na **percarbonate** at a const. temp. followed by drying to give Na **percarbonate** grains, unpurified Na **carbonate** anhydride is used as a raw material and the Na **percarbonate** grains of prescribed size are taken out from the dryers while unhomogeneous-sized grains are recirculated for continuously manufg. process. In manuf. of the Na **percarbonate** grains in reactors or **fluidized** bed dryers, Mg sulfate and .gtoreq.1 compds. selected from (A) water

glass

or powd. or granular Na **silicate** (aq. solns.) having a general formula Na₂O.nSiO₂.xH₂O (n = 1-4, x = 0-9), (B) higher aliph. acids (esters) of hydrocarbons or polyols and optionally polyoxyethylene, (C) pyridine compds. (salts) having .gtoreq.1 carboxy substitutes, and (D) arom. or aliph. amine (salts) having .gtoreq.1 **sulfonic acid** groups or carboxyl groups are allowed to be mixed into or on the surfaces of Na **percarbonate** grains. The Na **silicate coatings** improve soly. in cold water while the claimed org. compds. work as sequestering agents to prevent decompn. of the Na **percarbonate** grains which may contain transition metal impurities in moist air.

ST sodium percarbonate bleaching agent manuf; **detergent** bleacher sodium percarbonate **granule**; sequestering agent coating sodium percarbonate bleacher

IT Coatings

(atm. moisture-resistant; manuf. of **granular** Na percarbonate suitable for bleaching agents in **detergent** compns.)

IT Glycosides

Polyoxyalkylenes, uses

Sequestering agents

RL: TEM (Technical or engineered material use); USES (Uses)

(coatings on Na percarbonate grains; in manuf. of **granular** Na percarbonate suitable for bleaching agents in **detergent** compns.)

IT **Fatty acid** esters

Sugar esters

RL: TEM (Technical or engineered material use); USES (Uses)

(coatings on Na **percarbonate** grains; manuf. of **granular** Na **percarbonate** suitable for bleaching agents in **detergent** compns.)

IT Amines, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (having **sulfonic acid** groups or carboxyl groups,
coatings on Na **percarbonate** grains; in manuf. of
granular Na **percarbonate** suitable for bleaching
 agents in **detergent** compns.)

IT Bleaching agents
Detergents
 (manuf. of **granular** Na percarbonate suitable for bleaching
 agents in **detergent** compns.)

IT 54-21-7, Sodium salicylate 57-50-1, uses 69-65-8, D-Mannitol
 110-86-1D, Pyridine, carboxy derivs. 482-54-2 499-83-2, Dipicolinic
 acid 1344-09-8, Water glass 6834-92-0, Sodium metasilicate
 7487-88-9, Magnesium sulfate, uses 25322-68-3
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings on Na percarbonate grains; in manuf. of **granular** Na
 percarbonate suitable for bleaching agents in **detergent**
 compns.)

IT 3313-92-6P, Sodium percarbonate
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (**granular**; manuf. of **granular** Na percarbonate
 suitable for bleaching agents in **detergent** compns.)

IT 497-19-8, Sodium carbonate, reactions 7722-84-1, Hydrogen peroxide,
 reactions
 RL: RCT (Reactant)
 (in manuf. of **granular** Na percarbonate suitable for bleaching
 agents in **detergent** compns.)

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L5 ANSWER 20 OF 89 CA COPYRIGHT 2002 ACS
 AN 129:190764 CA
 TI High-bulk-density **granulated detergent** compositions
 and production methods therefor
 IN Murakami, Yasuhiro; Tanimoto, Hitoshi
 PA Kao Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C11D003-08
 ICS C11D003-12; C11D010-06; C11D011-00; C11D011-04; C11D017-06
 CC 46-6 (Surface Active Agents and Detergents)
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|----------|
| PI | JP 10195485 | A2 | 19980728 | JP 1997-3854 | 19970113 |
| AB | Detergents contain 1-8% cryst. silicates coated with soap compns. and 20-40% anionic surfactants. Thus, a coating compn. contained a tallow fatty acid , polyethylene glycol alkyl ether, and polyethylene glycol at ratio 35:55:10. | | | | |
| ST | anionic surfactant silicate detergent; coating soap cryst silicate | | | | |
| IT | Polyoxyalkylenes, uses RL: MOA (Modifier or additive use); USES (Uses) (alkyl ethers; high-bulk-d. granulated detergents contg. anionic surfactants and cryst. silicates coated with soaps) | | | | |
| IT | Anionic surfactants Detergents Nonionic surfactants (high-bulk-d. granulated detergents contg. anionic surfactants and cryst. silicates coated with soaps) | | | | |
| IT | Polyoxyalkylenes, uses RL: MOA (Modifier or additive use); USES (Uses) (high-bulk-d. granulated detergents contg. anionic surfactants and cryst. silicates coated with soaps) | | | | |
| IT | Silicates, uses RL: TEM (Technical or engineered material use); USES (Uses) (high-bulk-d. granulated detergents contg. anionic surfactants and cryst. silicates coated with soaps) | | | | |
| IT | Soaps RL: TEM (Technical or engineered material use); USES (Uses) (high-bulk-d. granulated detergents contg. anionic surfactants and cryst. silicates coated with soaps) | | | | |
| IT | Alkali metals, uses Alkaline earth metals Group IIB elements Group IIIA elements Group IVA elements Group VIII elements RL: TEM (Technical or engineered material use); USES (Uses) (silicates; high-bulk-d. granulated detergents contg. anionic surfactants and cryst. silicates coated with soaps) | | | | |
| IT | Tallow fatty acids RL: MOA (Modifier or additive use); USES (Uses) (soaps; high-bulk-d. granulated detergents contg. anionic surfactants and cryst. silicates coated with soaps) | | | | |

IT **Fatty acid esters**

RL: TEM (Technical or engineered material use); USES (Uses)

(.alpha.-sulfo, Me esters, sodium salts; high-bulk-d.

granulated detergents contg. anionic surfactants and
cryst. **silicates coated** with soaps)

IT 25322-68-3, Polyethylene glycol 25322-68-3D, Polyethylene glycol, alkyl
ethers

RL: MOA (Modifier or additive use); USES (Uses)

(high-bulk-d. **granulated detergents** contg. anionic
surfactants and cryst. silicates coated with soaps)

IT 98-11-3D, Benzenesulfonic acid, alkyl derivs., sodium salts 151-21-3,
Sodium dodecyl sulfate, uses 1191-50-0, Sodium tetradecyl sulfate

RL: TEM (Technical or engineered material use); USES (Uses)

(high-bulk-d. **granulated detergents** contg. anionic
surfactants and cryst. silicates coated with soaps)

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L5 ANSWER 45 OF 89 CA COPYRIGHT 2002 ACS
AN 118:8927 CA
TI Sodium percarbonate stabilized by a long-chain aliphatic carboxylic acid coating, and its uses
IN Block, Christian; Schreiber, Gerald
PA Henkel K.-G.a.A., Germany
SO PCT Int. Appl., 17 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|-----------------|----------|
| PI | WO 9217404 | A1 | 19921015 | WO 1992-EP577 | 19920317 |
| | W: JP, US | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE | | | | |
| PRAI | DE 1991-4109954 | | 19910326 | | |

L5 ANSWER 47 OF 89 CA COPYRIGHT 2002 ACS
AN 115:235227 CA
TI Bleaching agents and bleaching detergent compositions with good storage stability
IN Kuroda, Mutsumi
PA Kao Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|-------------|------|----------|-----------------|----------|
| PI | JP 03115496 | A2 | 19910516 | JP 1989-254213 | 19890929 |

L5 ANSWER 49 OF 89 CA COPYRIGHT 2002 ACS
AN 110:97601 CA
TI Surface treatment of solid detergent components in a fluidizing apparatus
IN Schmidt, Eberhard; Geitner, Frank; Meinhard, Bernd Ruediger; Sieg, Norbert; Uhlig, Norbert; Moerl, Lothar; Kuenne, Hans Joachim; Krell, Lothar
PA VEB Waschmittelwerk Genthin, Ger. Dem. Rep.
SO Ger. (East), 8 pp.
CODEN: GEXXA8
DT Patent
LA German
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|-----------------|----------|
| PI | DD 255882 | A1 | 19880420 | DD 1986-296068 | 19861107 |

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L5 ANSWER 45 OF 89 CA COPYRIGHT 2002 ACS

AN 118:8927 CA

TI Sodium percarbonate stabilized by a long-chain aliphatic carboxylic acid coating, and its uses

IN Block, Christian; Schreiber, Gerald

PA Henkel K.-G.a.A., Germany

SO PCT Int. Appl., 17 pp.

CODEN: PIXXD2

DT Patent

LA German

IC ICM C01D015-10

ICS A61K033-00; C11D003-39

CC 49-5 (Industrial Inorganic Chemicals)

Section cross-reference(s): 46, 63

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|-----------------|----------|
| PI | WO 9217404 | A1 | 19921015 | WO 1992-EP577 | 19920317 |

W: JP, US

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE

PRAI DE 1991-4109954 19910326

AB The **coating** consists at least partially of .gtoreq.1 carboxylic acids m. <35.degree. and .gtoreq.1 carboxylic acids m. >35.degree.. Na **percarbonate** stabilized by a **coating** with long-chain aliph. carboxylic acids contg. .gtoreq.8 but preferably .ltoreq.24 C atoms, are extraordinarily stable, even in moist and warm atms., and is used as oxidizing agent in cleaning compns., disinfectant formulations, and laundry **detergents**. A mixt. consisting of 92.5 wt.% com. Na **percarbonate coated** with 7.5 wt.% of a 1:1 mixt. of Edenor V 85 KR (C8-10-**fatty acids**) and tech. **stearic acid** was free-flowing, and used in a **detergent** compn. consisting of Na dodecylbenzenesulfonate 16, tallow alc.

ethoxylate

5, Na2CO3 20, Na **silicate** 8.5, acrylic acid-maleic acid copolymer 4.5, **zeolite** A 28, tetraacetylenediamine (**granulated**, 96%) 2, and additives, e.g., enzymes, optical brighteners, perfume), Na2SO4, and water 16 wt.%. The active O content

of

the formulation after storage for 2 wks at 43.degree. and relative humidity 98% was 36, vs. 22 and 4%, resp., for formulations contg. conventionally **coated** and uncoated Na **percarbonate**.

ST sodium **percarbonate** stabilization **coating**; carboxylic acid **coating** sodium **percarbonate**; aliph carboxylic acid **coating**; Edenor V85KR aliph carboxylic acid; **stearic acid** Edenor V85KR **coating**; cleaning compn stabilized sodium **percarbonate**; disinfectant formulation stabilized sodium **percarbonate**; laundry detergent stabilized sodium **percarbonate**

IT **Fatty acids**, uses

RL: USES (Uses)

(C8-11, **coating** with, of sodium **percarbonate**, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)

IT Fluorescent brighteners

Perfumes

Enzymes

RL: USES (Uses)

- (detergents contg., sodium percarbonate stabilization for, by coating with carboxylic acids)
- IT Bactericides, Disinfectants, and Antiseptics
(sodium percarbonate for, stabilization of, by coating with carboxylic acids)
- IT Zeolites, uses
RL: USES (Uses)
(A, detergents contg., sodium percarbonate stabilization for, by coating with carboxylic acids)
- IT **Fatty acids**, uses
RL: USES (Uses)
(C12-22, **coating** with, of sodium **percarbonate**, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)
- IT **Fatty acids**, uses
RL: USES (Uses)
(C8-10, **coating** with Edenor V 85KR, of sodium **percarbonate**, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)
- IT Alcohols, uses
RL: USES (Uses)
(C8-22, compns. contg. carboxylic acids and, coating with, of sodium percarbonate, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)
- IT Alcohols, compounds
RL: USES (Uses)
(C8-22, ethoxylated, compns. contg. carboxylic acids and, coating with,
of sodium percarbonate, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)
- IT Detergents
(cleaning compns., sodium percarbonate for, stabilization of, by coating with carboxylic acids)
- IT Coating process
(fluidized-bed, stabilization by, of sodium percarbonate, with carboxylic acids, for cleaning compns. and disinfectant formulations and laundry detergents)
- IT Detergents
(laundry, sodium percarbonate for, stabilization of, by coating with carboxylic acids)
- IT Carboxylic acids, uses
RL: USES (Uses)
(long-chain, coating with, of sodium percarbonate, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)
- IT Amides, uses
RL: USES (Uses)
(long-chain, N-(hydroxyalkyl), compns. contg. carboxylic acids and, coating with, of sodium percarbonate, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)
- IT **Fatty acids**, esters
RL: USES (Uses)
(long-chain, esters, compns. contg. carboxylic acids and, **coating** with, of sodium **percarbonate**, for stabilization, for cleaning compns. and disinfectant formulations and laundry detergents)
- IT Alcohols, compounds
RL: USES (Uses)

(tallow, ethoxylated, detergents contg., sodium percarbonate
stabilization for, by coating with carboxylic acids)

IT 26896-18-4, Isononanoic acid 30399-84-9, Isostearic acid 32844-67-0,
Isopalmitic acid
RL: USES (Uses)
(coating with, of sodium percarbonate, for stabilization, for cleaning
compns. and disinfectant formulations and laundry detergents)

IT 497-19-8, Carbonic acid disodium salt, uses 1344-09-8, Sodium silicate
7757-82-6, Sodium sulfate, uses 10543-57-4, Tetraacetythylenediamine
25155-30-0, Sodium dodecylbenzenesulfonate 29132-58-9
RL: USES (Uses)
(detergents contg., sodium percarbonate stabilization for, by coating
with carboxylic acids)

IT 3313-92-6, Sodium percarbonate
RL: USES (Uses)
(oxidizing agent, stabilization of, by coating with carboxylic acids,
for cleaning compns. and disinfectant formulations and laundry
detergents)

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L5 ANSWER 47 OF 89 CA COPYRIGHT 2002 ACS
 AN 115:235227 CA
 TI Bleaching agents and bleaching detergent compositions with good storage stability
 IN Kuroda, Mutsumi
 PA Kao Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C11D007-54
 ICI C11D007-54, C11D007-26, C11D007-34
 CC 46-5 (Surface Active Agents and Detergents)
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--|-------------|-------------|-----------------|-------------|
| PI | JP 03115496 | A2 | 19910516 | JP 1989-254213 | 19890929 |
| AB | The title compns. contain Na percarbonate (I) particles coated with fatty acid mixts. contg. .gtoreq.60% C16 and C18 fatty acids and 15-70% unsatd. fatty acids and granular bleach activators having phenolsulfonic acid (salt) as leaving groups. Heating C9H19N+Me2(CH2)3CO2-p-C6H4SO3- with 20 g polyethylene glycol, extruding to give a granulated bleach activator, and mixing the granules (5%) with 10% I (coated with mixt. contg. C16 29.3, C18 16.3, monounsatd. C16 4.1, monounsatd. C18 38.5, and diunsatd. C18 fatty acid 3.6%) and 85% other detergent components gave a bleaching detergent which retained 89.2% of the available O during 14 days at 40.degree. and 80% relative humidity. | | | | |
| ST | bleach percarbonate detergent stability; fatty acid coating percarbonate stability; phenolsulfonate bleach activator detergent; sulfophenol bleach activator detergent | | | | |
| IT | Quaternary ammonium compounds, uses and miscellaneous RL: USES (Uses) (bleaching activators, detergents contg. percarbonate and, stable) | | | | |
| IT | Fatty acids , uses and miscellaneous RL: USES (Uses) (sodium percarbonate particles coated by, for stability in detergents) | | | | |
| IT | Bleaching agents (sodium percarbonate, fatty acid-coated , detergents contg., stable) | | | | |
| IT | Detergents (laundry, contg. sodium percarbonate and bleach activator, storage-stable) | | | | |
| IT | 89740-11-4 | 117205-23-9 | 132787-34-9 | 132787-35-0 | 132787-37-2 |
| | 137023-82-6 | 137170-47-9 | | | |
| | RL: USES (Uses) (bleaching activators, detergents contg. percarbonate and, stable) | | | | |
| IT | 3313-92-6, Sodium percarbonate RL: USES (Uses) (bleaching agents, fatty acid-coated , storage-stable, detergents contg.) | | | | |

L5 ANSWER 49 OF 89 CA COPYRIGHT 2002 ACS
 AN 110:97601 CA
 TI Surface treatment of solid detergent components in a fluidizing apparatus
 IN Schmidt, Eberhard; Geitner, Frank; Meinhard, Bernd Ruediger; Sieg,
 Norbert; Uhlig, Norbert; Moerl, Lothar; Kuenne, Hans Joachim; Krell,
 Lothar
 PA VEB Waschmittelwerk Genthin, Ger. Dem. Rep.
 SO Ger. (East), 8 pp.
 CODEN: GEXXA8
 DT Patent
 LA German
 IC ICM B01J002-16
 ICS C11D003-395; C11D007-54; C11D011-02
 CC 46-5 (Surface Active Agents and Detergents)
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--|------|----------|-----------------|----------|
| PI | DD 255882 | A1 | 19880420 | DD 1986-296068 | 19861107 |
| AB | In the title treatment, solid detergent components fluidized by a gas flowing upward are subjected to gas streams flowing into the fluidized particles in a predominantly horizontal direction to prevent zones of low turbulence and give uniform treatment of the particles . The process was used to treat a solid detergent compn. contg. Na5P3O10 46, soda 14, Na perborate 24, Na disilicate 8, MgSO4 6, cellulose ether 1.7, and optical brightener 0.3% by adding alkylbenzenesulfonic acid, fatty acids , and nonionic surfactant in 6:1:2 ratio to the top of the fluidizing app. Steam contg. NaOH was used as a carrier for injection of the added components. | | | | |
| ST | fluidization app detergent treatment; laundry detergent fluidization treatment | | | | |
| IT | Fluidization | | | | |
| | (of detergent components, for uniform surface treatment) | | | | |
| IT | Detergents | | | | |
| | (laundry, manuf. of, fluidizing app. for surface treatment of particles in) | | | | |

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L5 ANSWER 49 OF 89 CA COPYRIGHT 2002 ACS
 AN 110:97601 CA
 TI Surface treatment of solid detergent components in a fluidizing apparatus
 IN Schmidt, Eberhard; Geitner, Frank; Meinhard, Bernd Ruediger; Sieg,
 Norbert; Uhlig, Norbert; Moerl, Lothar; Kuenne, Hans Joachim; Krell,
 Lothar
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| ST | fluidization app detergent treatment; laundry detergent fluidization treatment | | | | |
| IT | Fluidization (of detergent components, for uniform surface treatment) | | | | |
| IT | Detergents (laundry, manuf. of, fluidizing app. for surface treatment of particles in) | | | | |

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L5 ANSWER 53 OF 89 CA COPYRIGHT 2002 ACS
 AN 105:26172 CA
 TI Continuous dusting of **granulated detergent** products
 IN Moerl, Lothar; Kuenne, Hans Joachim; Krell, Lothar; Kliefoth, Joerg;
 Schmidt, Eberhard; Meinhard, Ruediger; Geitner, Frank; Sieg, Norbert;
 Uhlig, Norbert; Voelker, Cornelia
 PA VEB Waschmittelwerk Genthin, Ger. Dem. Rep.
 SO Ger. (East), 4 pp.
 CODEN: GEXXA8
 DT Patent
 LA German
 IC ICM B01J002-30
 ICS C11D011-00

CC 46-5 (Surface Active Agents and Detergents)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--|------|----------|-----------------|----------|
| PI | DD 228458 | A1 | 19851016 | DD 1983-258342 | 19831221 |
| AB | <p> Powd. detergent components and liq. detergent components are added continuously to a fluidized bed of detergent particles (varying in size between powder and granule sizes), and dry granules having sufficient size and d. are removed from the base of the app. to give a granulated detergent having a uniform compn., particle size, and bulk d. Thus, powd. components comprising Na₅P₃O₁₀ 600, calcined soda 150, Na₂SO₄ 390, Na perborate 210, Na disilicate 60, Mg silicate 45, and CM-cellulose 15 kg/h and liq. components comprising dodecylbenzenesulfonic acid 130, fatty acid 85, and nonionic surfactants 15 kg/h were added to a fluidized bed, and granules (90% having particle size 0.7-0.8 mm, bulk d. 600 kg/m²) were removed from the bottom of the fluidized layer. The granules were resistant to agglomeration. </p> | | | | |
| ST | <p> granulation detergent fluidizing process; agglomeration prevention detergent granule </p> | | | | |
| IT | <p> Detergents (granulation of powd. and liq. components of, in fluidized bed) </p> | | | | |
| IT | <p> Agglomeration (prevention of, in granulation of detergents in fluidized bed) </p> | | | | |
| IT | <p> Granulation (fluidized-bed, of powd. and liq. detergent components in) </p> | | | | |

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L5 ANSWER 56 OF 89 CA COPYRIGHT 2002 ACS
 AN 103:125372 CA
 TI Device for surface spraying of fluidized bed granulate products
 IN Moerl, Lothar; Kuenne, Hans Joachim; Krell, Lothar; Kliefoth, Joerg;
 Schmidt, Eberhard; Meinhard, Ruediger; Geitner, Frank; Sieg, Norbert;
 Uhlig, Norbert; Voelker, Cornelia
 PA VEB Waschmittelwerk, Ger. Dem. Rep.
 SO Ger. (East), 4 pp.
 CODEN: GEXXA8
 DT Patent
 LA German
 IC ICM B01J002-16
 ICS B01J008-24
 CC 46-1 (Surface Active Agents and Detergents)
 Section cross-reference(s): 47

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|----------|
| PI | DD 221377 | A1 | 19850424 | DD 1983-258341 | 19831221 |
| AB | An app. for the conversion of powders to granulated products such as detergents is described. The app. has an inlet at the top for adding a powd. compn., inlets at the top, metal, and bottom for adding fluidizing gas, an inlet near the middle for spraying a liq. compn. onto a powd. compn., a means in the middle for dispersing solid material, an outlet at the top for gas, and an outlet at the bottom for the granulated product. The app. prevents agglomeration during the manuf. of granulated products. Thus, the granulation app. was used to convert a powd. mixt. (900 kg/h) of Na ₅ P ₃ O ₁₀ , Na ₂ CO ₃ , Na ₂ SO ₄ , Na perborate , Na disilicate, Mg silicate , and CM-cellulose to a granulated product (particle size 0.8 mm, bulk d. 600 kg/m ²) by spraying the powder with a liq. compn. (140 kg/h) contg. dodecylbenzenesulfonate, fatty acid , and nonionic surfactant. | | | | |
| ST | granulation fluidization app detergent ; powder fluidization granulation app; agglomeration prevention granulation powder | | | | |
| IT | Granulating apparatus (for powders, by spraying with liq. in fluidized state) | | | | |
| IT | Detergents (manuf. of granulated , from powders , app. for) | | | | |
| IT | Agglomeration (prevention of, in app. for granulation of powder with liq.) | | | | |

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L5 ANSWER 60 OF 89 CA COPYRIGHT 2002 ACS
 AN 94:123531 CA
 TI Continuous production of **granulated detergents** and
 cleaning agents in fluidized bed apparatus
 IN Mittelstrass, Manfred; Moerl, Lothar; Kuenne, Hans Joachim; Sachse,
 Joachim; Schmidt, Eberhard; Schultz, Wolfgang; Sieg, Norbert
 PA Ger. Dem. Rep.
 SO Ger. (East), 11 pp.
 CODEN: GEXXA8
 DT Patent
 LA German
 IC B01J008-24; C11D011-00
 CC 46-5 (Surface Active Agents and Detergents)
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | DD 140987 | Z | 19800409 | DD 1979-210340 | 19790105 |
| | SU 1081203 | A1 | 19840323 | SU 1979-7770975 | 19791213 |
| PRAI | DD 1979-210340 | | 19790105 | | |
| AB | Dodecylbenzenesulfonic acid (I) [27176-87-0] (contg. fatty acids and nonionic surfactants in some cases) is sprayed on a mixt. of Na5P3O10 (phase II content >90%) and other powd. detergent components in a fluidized bed app. in a method for the continuous prodn. of granular detergents . Thus, 85 parts of mixt. of Na5P3O10 (95% phase II, bulk d. 1000 g/L, 80% particle with diam. <0.2 mm) 40, Na2CO3 10, Na2SO4 25.8, Na perborate 14, and additives 10.2% was fluidized and sprayed with 15 parts 10:7 I- fatty acid mixt. to prep. dust-free granules with bulk d. 530 g/L. | | | | |
| ST | sodium tripolyphosphate detergent fluidization granulation ; dodecylbenzenesulfonic acid granulation detergent fluidization; phosphate builder detergent granulation | | | | |
| IT | Fluidized beds and systems (granulation of tripolyphosphate-contg. detergent powders in) | | | | |
| IT | Detergents (granulation of tripolyphosphate-contg., in fluidized bed) | | | | |
| IT | Granulation (of detergents contg. sodium tripolyphosphate, in fluidized bed) | | | | |
| IT | 7758-29-4 RL: USES (Uses) (granulation of detergent powders contg., in fluidized bed) | | | | |
| IT | 27176-87-0 RL: USES (Uses) (granulation of tripolyphosphate-contg. detergents by, in fluidized bed) | | | | |

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L7 ANSWER 1 OF 13 CA COPYRIGHT 2002 ACS

TI Method for the production of particulate washing or cleaning agents

L7 ANSWER 2 OF 13 CA COPYRIGHT 2002 ACS

TI **Detergent particle** groups and manufacturing methods therefor

L7 ANSWER 3 OF 13 CA COPYRIGHT 2002 ACS

TI Coated (cyanomethyl)trialkylammonium salt granules as activators for bleaches

L7 ANSWER 4 OF 13 CA COPYRIGHT 2002 ACS

TI Process for the production of a detergent composition

L7 ANSWER 5 OF 13 CA COPYRIGHT 2002 ACS

TI Continuous production method of high density **powder detergents** with high fluidity

L7 ANSWER 6 OF 13 CA COPYRIGHT 2002 ACS

TI **Powdered detergent** compositions

L7 ANSWER 7 OF 13 CA COPYRIGHT 2002 ACS

TI **Powder detergent** composition for cold water laundering of fabrics

L7 ANSWER 8 OF 13 CA COPYRIGHT 2002 ACS

TI Continuous dusting of **granulated detergent** products

L7 ANSWER 9 OF 13 CA COPYRIGHT 2002 ACS

TI Device for surface spraying of fluidized bed granulate products

L7 ANSWER 10 OF 13 CA COPYRIGHT 2002 ACS

TI Coated particulate material

L7 ANSWER 11 OF 13 CA COPYRIGHT 2002 ACS

TI Decomposition-resistant **powdered detergents**

L7 ANSWER 12 OF 13 CA COPYRIGHT 2002 ACS

TI Bleaching and washing agents

L7 ANSWER 13 OF 13 CA COPYRIGHT 2002 ACS

TI Detergent tablets

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